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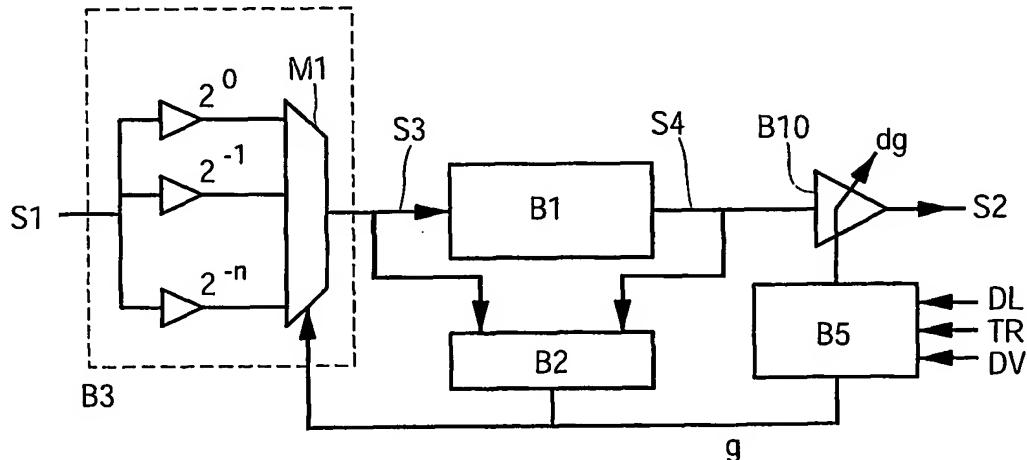
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(57) Abstract: An automatic gain control circuit has a gain determination circuit (B2) which determines a first gain factor (g), and a first gain controller (B3) which controls an amplitude of an input signal (S1) with the first gain factor (g) to supply a gain controlled signal (S3). A processing circuit (B1; B 1, B 11) with a predetermined limited dynamic range processes the gain controlled signal (S3) to obtain an output signal (S4; S2). The automatic gain control circuit further comprises a compensation circuit (B5) which determines a second gain factor (dg) based on the first gain factor (g) and input parameters (DL, TR, DV) which define a time variation of the second gain factor (dg), and a second gain controller (B 1; B 10) which receives the second gain factor (dg) to obtain a compensated output signal (S2) that is substantially compensated for an amplitude change of the gain controlled signal (S3) due to a change of the first gain factor (g).